

February 24 - 27, 2013 * Asilomar Conference Grounds * Pacific Grove, California USA

SUNDAY, FEBRUARY 24

1:30 PM *REGISTRATION BEGINS AND IS OPEN FOR THE DURATION OF THE EVENT, Chapel Hall until 3PM Sunday, then moved to Sanderling Hall after event starts*

KEYNOTE ADDRESS SESSION

Benny D Freeman, University of Texas, Austin, Discussion Leader

3:00 PM	Co-Organizers Overview and Objectives of the Workshop	
	J. Paul Armistead, Office of Naval Research	
3:15 PM	Evolving Navy Needs and Research Programs in Water Purification and Desalination	1
	Michelle Chapman, Bureau of Reclamation	
4:15 PM	The Challenge for Membrane Materials in Water Separations	2
5:15 PM	<i>WINE TOAST AND WELCOME RECEPTION, Sponsored by IBM Almaden Research Center</i>	
6:00 PM	<i>DINNER</i>	

MONDAY, FEBRUARY 25

7:30 AM *BREAKFAST*

INVITED LECTURE SESSION I

W.E. Mickols, Phillips, Discussion Leader

	Masaru Kurihara, Toray, Japan	
9:00 AM	Pursuit of Ultimate Energy Efficient Reverse Osmosis Membrane for Seawater Desalination in Mega-ton Water System Project	3
	Abhishek Roy, Dow Water and Process Solutions	
9:45 AM	Recent Advances In Polyamide Chemistry for RO membranes	4
10:15 AM	<i>BREAK</i>	
	Young-Hye Na, IBM Almaden Research Center	
10:30 AM	Novel Functional Materials for Water Treatment Membranes	5
	Vicki Chen, University of New South Wales, Australia	
11:00 AM	Designing Membranes for Distillation and Crystallization	6
	Klaus-Viktor Peinemann, KAUST, Kingdom of Saudi Arabia	
11:30 AM	High Performance UF/NF- Membranes by Block Copolymer Micelle Assembly	7
12:15 PM	<i>LUNCH</i>	

MONDAY, FEBRUARY 25, CONT'D

INVITED LECTURE SESSION II		
Lloyd Robeson, Lehigh University, Discussion Leader		
1:45 PM	Mike Hickner, The Pennsylvania State University Using Infrared Spectroscopy to Learn about Water Treatment Membranes	8
2:15 PM	Carl Willis, Shawn Wei, Kraton Polymer Selectively Mid-block Sulfonated Pentablock Copolymer Membranes	9
2:45 PM	Harry Ridgeway, KAUST, Kingdom of Saudi Arabia Simulating Biofoulant Sorption to Polyamide Membranes Under Cross-Flow (Shear) Conditions	10
3:15 PM	<i>BREAK</i>	
INVITED LECTURE SESSION III		
Eric Baer, Case Western Reserve University, Discussion Leader		
3:30 PM	Donald R. Paul, University of Texas, Austin Structure/Property Relationships in Polymer Membranes for Water Purification and Power Generation	11
4:15 PM	Benjamin Chu and Benjamin S. Hsiao, Stony Brook University Nanofibrous Polymeric Membranes with Directed Water Channels	12
5:00 PM	<i>RECEPTION AND POSTER SESSION, Sponsored by Dow</i>	

TUESDAY, FEBRUARY 26

7:30 AM	<i>BREAKFAST</i>	
INVITED LECTURE SESSION IV		
Ingo Pinnau, KAUST, Discussion Leader		
9:00 AM	Viatcheslav (Slava) Freger, Technion - Israel Institute of Technology, Israel Understanding and Improving retention of Salts and Neutral Molecules in RO and NF	13
9:45 AM	Jeffrey R. McCutcheon, University of Connecticut New Membranes for Forward and Pressure Retarded Osmosis	14
10:15 AM	<i>BREAK</i>	
10:30 AM	Isaac Farr, Hydration Technology Innovations Advanced Forward Osmosis Membranes for Water Purification	15
11:00 AM	Ho Bum Park, Hanyang University, Korea Atomic Layered Polymeric Composite Membranes for Membrane Osmosis Applications	16
11:30 AM	Eric M.V. Hoek, UCLA High Throughput Screening of Biofilm Formation and Removal on Water Treatment Membranes	17

TUESDAY, FEBRUARY 26, CONT'D

12:15 PM LUNCH

INVITED LECTURE SESSION V

Jeff McCutcheon, UConn, Discussion Leader

1:45 PM	Abhishek Shrivastava, Dow Water and Process Solutions The Thermodynamic Efficiency of RO Membranes	18
2:15 PM	Lauren F. Greenlee, NIST Mixed Matrix Membranes for Water Filtration	19
2:45 PM	BREAK	
3:00 PM	Werner Kofod Nielsen, Stein Erik Skilhagen, and Geir Brekke, Statkraft Recent Development and Future Opportunities in Osmotic Driven Processes	20
3:30 PM	Mary Laura Lind, Arizona State University Nanocomposite Membranes for Water Purification	21
4:00 PM	Sungsoo Han, Samsung Preparation and Characterization of Novel Cellulose Membrane for Desalination Application	22
4:30 PM	Pierre Cote, Cote Membranes, Ltd TBA	23
5:00 PM	<i>RECEPTION AND POSTER SESSION, Sponsored by Toray</i>	

WEDNESDAY, FEBRUARY 27

7:30 AM BREAKFAST

INVITED LECTURE SESSION VI

Lauren Greenlee, NIST, Discussion Leader

9:00 AM	Benny D. Freeman, University of Texas, Austin Energy/Water Nexus	24
9:45 AM	Andrew Groth, Siemens New Materials for Low Pressure Hollow Fiber Membranes	25
10:15 AM	BREAK	
10:30 AM	Takashi Kato, The University of Tokyo; Masahiro Henmi, Toray Industries, Japan Self-Organized Liquid Crystalline Nanostructured Membranes for Water Treatment: Selective Permeation of Ions	26
11:00 AM	Neal Chung, P. Wang and F.Edwie, National University of Singapore Membrane Development for Membrane Distillation and Hybrid Desalination Technologies using Cold Energy from Liquefied Natural Gas	27
11:30 AM	James E. McGrath, Virginia Tech Novel Post Fabrication Crosslinked and Nanophase Separated Membranes	28
12:15 PM	<i>CLOSING REMARKS AND LUNCH</i>	